

MISSOURI HIGHWAY AND TRANSPORTATION COMMISSION

ROUTE	STATE	DISTRICT	SHEET NO.
JOB NO.			
CONTRACT ID			
PROJECT NO.			
COUNTY			DATE
SEC/SUR	TWP	RGE	

ELEVATION A-A
(Normal to § Roadway)

SECTION THRU BOX
(Normal to § Structure)

DETAIL "A"

Note: Slope of bottom slab shall be placed at natural stream gradient.
If unsuitable material is encountered, excavation of unsuitable material and furnishing and placing of granular backfill shall be in accordance with Sec 206.

VARIABLE	EQUATION	DIM.	VARIABLE	EQUATION	DIM.
"S"	--		"Q"	TX(cos Z)	
"HT"	--		"T"	G(sec Z)	
"TS"	--		"V"	HT + TS - 12"	
"BS"	--		"W"	2A + B + C + D + E + SS	
"TX"	--		"X"	3" + TX(tan Z)	
"TI"	--		"Z"	Skew Angle	
"A"	--		"AA"	(F/2)(tan Z)	
"B"	--		"BB"	(A + B)(sec Z)	
"C"	--		"CC"	(A + C)(sec Z)	
"D"	G + I + J		"DD"	D(sec Z)	
"E"	G + D + 20"		"EE"	E(sec Z)	
"F"	3S + 2TX + 2TI		"HH"	20"(sec Z)	
"G"	2V		"II"	20"(cos Z)	
"H"	(AA + CC + DD)(sin Z)		"SS"	F(sin Z)	
"I"	3"(cos Z)		"VV"	TX(sin Z)	
"J"	(A + B + E)(tan Z)				
"K"	[(3/2)S + TI](sec Z)				
"L"	AA + BB + CC + DD + EE				
"O"	I + YY				

§ Sta. = _____

Pr. Gr. Elev. at § Sta. = _____

Fill at § Rdwy. at § Station = _____

GENERAL NOTES:

Design Specifications:
2002 - AASHTO 17th Edition
Load Factor Design

Design Unit Stresses:
Class B-1 concrete f'c = 4,000 psi
Reinforcing steel (Grade 60), fy = 60,000 psi

Design Loading:
HS20-44 HS20 Modified

Earth 120 #/ft.³
Equivalent fluid pressure
30 #/ft.² (Min.) - 60 #/ft.² (Max.)

All elevations shown are in feet unless otherwise noted.

The box shown below indicating whether a precast or ctp box was used should be checked by MoDOT Construction personnel:
☐ Precast Box used
☐ Cast-in-Place Box used

When alternate precast box sections are used, the minimum barrel length measured along the shortest wall from the first joint to the outside of the headwall, shall be 3'-2". Reinforcement and dimensions for the wings and headwalls shall be in accordance with Missouri Standard Plans drawing.

Minimum clearance to reinforcing steel shall be 1 1/2", unless otherwise shown.

"Sec" refers to the sections in the standard and supplemental specifications unless specified otherwise.

PLAN SHOWING LAYOUT DIMENSIONS

BAR SIZE	PLAIN (LBS)	EPOXY (LBS)
4		
5		
6		
7		
8		
9		
10		
11		
TOTAL		

		FINAL QUANTITIES
Class 4 Excavation	cu. yard	
Removal of Bridges	lump sum	
Class B-1 Concrete (Culverts-Bridge)	cu. yard	
Reinforcing Steel (Culverts-Bridge)	pound	

DETAIL "B"

LOCATION SKETCH

Designed _____
Detailed _____
Checked _____

Note: This drawing is not to scale. Follow dimensions.

Sheet No. of

STATE ROAD _____
ABOUT _____
PROJECT NO. _____
JOB NO. _____

STA. _____
RTE. _____

Date: / /

BOX8APD